

REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed 5/23/2007. Claims 1-14 are pending in this application. This Amendment amends claims 1-3, 5-7, and 9 and cancels 4, 8, and 12-14. Reconsideration of the rejected claims is respectfully requested.

Objection to the Claims

Claims 2-4, 6-8, and 12-14 are objected to under 37 C.F.R. 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 2 and 6 have been amended to recite, "an entire portion of each task." The independent claims 1 and 5 each recite, "each task of the plurality of tasks." Thus the amended claims 2 and 6 further limit each task of the plurality of tasks. Claims 3 and 7 were objected to for being dependent upon claims 2 and 6. Claims 4, 8, and 12-14 have been canceled. Applicants therefore respectfully submit that the objection with respect to these claims be withdrawn.

Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 2-4, 6-8, and 12-14 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

(1) With regard to claims 2-3, 6-7, and 12-14: As previously mentioned with regard to the objections to claims 2-4, 6-8, and 12-14, claims 2 and 6 have been amended to clarify that "an entire portion of each task," as recited by claims 2 and 6, references "each task of the plurality of tasks," as recited by independent claims 1 and 5, respectively. Claims 12-14 have been canceled. Therefore, the Applicants respectfully request the rejection to be withdrawn.

(2) With regard to "a user entered value" as recited by claim 3: Claim 3 has been amended to further clarify the claim term as suggested by the Examiner. Therefore, the Applicants respectfully request the rejection to be withdrawn.

(3) With regard to claim 4: Claim 4 has been canceled. Therefore, the Applicants respectfully request the rejection to be withdrawn.

(4) With regard to claims 7-8, for being dependent upon rejected claims: Claim 7 is dependent upon amended claim 6, which is in acceptable form. Claim 8 has been canceled. Therefore, the Applicants respectfully request the rejection to be withdrawn.

(5) With regard to claims 12-14, for being dependent upon rejected claims: Claims 12-14 have been canceled. Therefore, the Applicants respectfully request the rejection to be withdrawn.

Rejection under 35 USC § 103, Applicant-Admitted Prior Art in view of *Robertazzi*

Claims 1-4, 5-8 and 9-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over applicants' admitted prior art (AAPA) in view of *Robertazzi et al.* (U.S. Patent No. 6,370,560) (hereinafter "*Robertazzi*"). Claim 1 is allowable as AAPA and *Robertazzi* either alone or in combination, do not teach or suggest each and every element of claim 1. For example, claim 1 recites in part:

analyzing a computational demand for each branch of the plurality of branches by determining a number of bottom-level nodes comprising each branch;
allocating each branch of the plurality of branches to a task of a plurality of tasks such that a total computational demand for each task of said plurality of tasks is substantially equal among said plurality of tasks, wherein the total computational demand for each task is determined by adding the computational demands for each branch that is allocated to the task of the plurality of tasks. (*emphasis added*).

AAPA cannot render claim 1 obvious, either alone or in combination with *Campise*. AAPA fails to make any reference of analyzing computational demand for branches and allocating branches to tasks. Thus, AAPA cannot render claim 1 obvious.

Moreover, *Robertazzi* does not make up for the deficiencies in AAPA with respect to claim 1. *Robertazzi* teaches a load sharing system which minimizes overall costs by assigning segments of a divisible load to distributed processor platforms based on the resource utilization cost of each processor platform. (*Robertazzi*, Abstract). Furthermore, the reference teaches a plurality of processors and a network for connecting the distributed processors where one of the processors is a controller for dividing the computer job to be processed into segments and assigning the segments to the distributed processor platforms based on each processor

platform's associated resource utilization cost. The allocation can also be further **based on an associated data link cost** with each processor platform. (*Robertazzi*, col. 3, lines 55-62).

Although *Robertazzi* teaches the use of parallel processing techniques that divide computer jobs among separate processors, *Robertazzi* does not teach "analyzing a computational demand for each branch of the plurality of branches by determining a number of bottom-level nodes comprising each branch," as recited in claim 1. The reference refers to dividing a load in into divisible tasks of simple operations or into repetitive and independent operations. The office action equates the divisible tasks of *Robertazzi* with "branches," as recited in claim 1. (Office Action, p. 6). As taught by *Robertazzi*, a divisible task is a partition of a job into a simple operation or into a repetitive and independent operation. (*Robertazzi*, col. 1, lines 35-67). A "branch" is neither of these. Even if, for purposes of argument, a task is regarded as a "branch," as recited in claim 1, *Robertazzi* makes no mention or suggestion of analyzing the computational demand of the divisible task.

Additionally, *Robertazzi* does not teach "allocating each branch of the plurality of branches to a task of a plurality of tasks **such that a total computational demand for each task of said plurality of tasks is substantially equal among said plurality of tasks,**" as recited by claim 1. Instead, *Robertazzi* teaches that allocation of the divisible tasks to the processors is based on the cost to use the processor or the cost of the data link to the processor. More specifically, *Robertazzi* teaches that the overall cost of the divisible job to be distributed among the available processor platforms in the network is calculated. "The overall cost is equal to the summation of the monetary cost (cost/unit load) of each processor platforms and their associated data links multiplied by the fraction of the load or task being processed on that processor multiplied by the size of the overall load or task. Task size can be computed based on such factors as the complexity of the task and the necessary data inputs. The cost is minimized by placing as much of the load or task on the processor platforms with associated data links having a relatively low resource utilization cost while still completing the processing within an acceptable finish time." (*Robertazzi*, col. 11, lines 15-27). Essentially, *Robertazzi* considers the complexity of the task when determining the cost of the divisible job, and attempts to minimize the cost by distributing the cost-heavy tasks to the processor with the lower utilization cost.

There is no mention or suggestion of allocating **such that a total computational demand for each task of said plurality of tasks is substantially equal among said plurality of tasks.**

Accordingly, *Robertazzi* fails to teach, "analyzing a computational demand for each branch," and "allocating each branch of the plurality of branches to a task of a plurality of tasks such that a total computational demand for each task of said plurality of tasks is substantially equal among said plurality of tasks," as recited in claim 1. Thus, *Robertazzi* cannot render claim 1 obvious, either alone or in combination with AAPA. As claim 1 is allowable, dependent claims 2-3 are also patentable for at least the same rationale. Neither does AAPA nor *Robertazzi* provide motivation for providing such functionality, and even if the references were combined for sake of argument the result would not arrive at the invention recited in Applicants' claim 1.

Applicants submit that independent claims 5 and 9 also recite features that are not taught or suggested by AAPA and *Robertazzi* and should be allowable for at least the same rationale as discussed with respect to claim 1. Claims 6-7 depend from independent claim 5 and thus derive patentability at least therefrom. Claims 10-11 depend from claim 9 and thus derive patentability at least therefrom. Applicants therefore respectfully request that the rejection with respect to the pending claims be withdrawn.

Amendment to the Claims

Unless otherwise specified, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the specification and do not add new matter.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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